T092nD" 82S2n86D

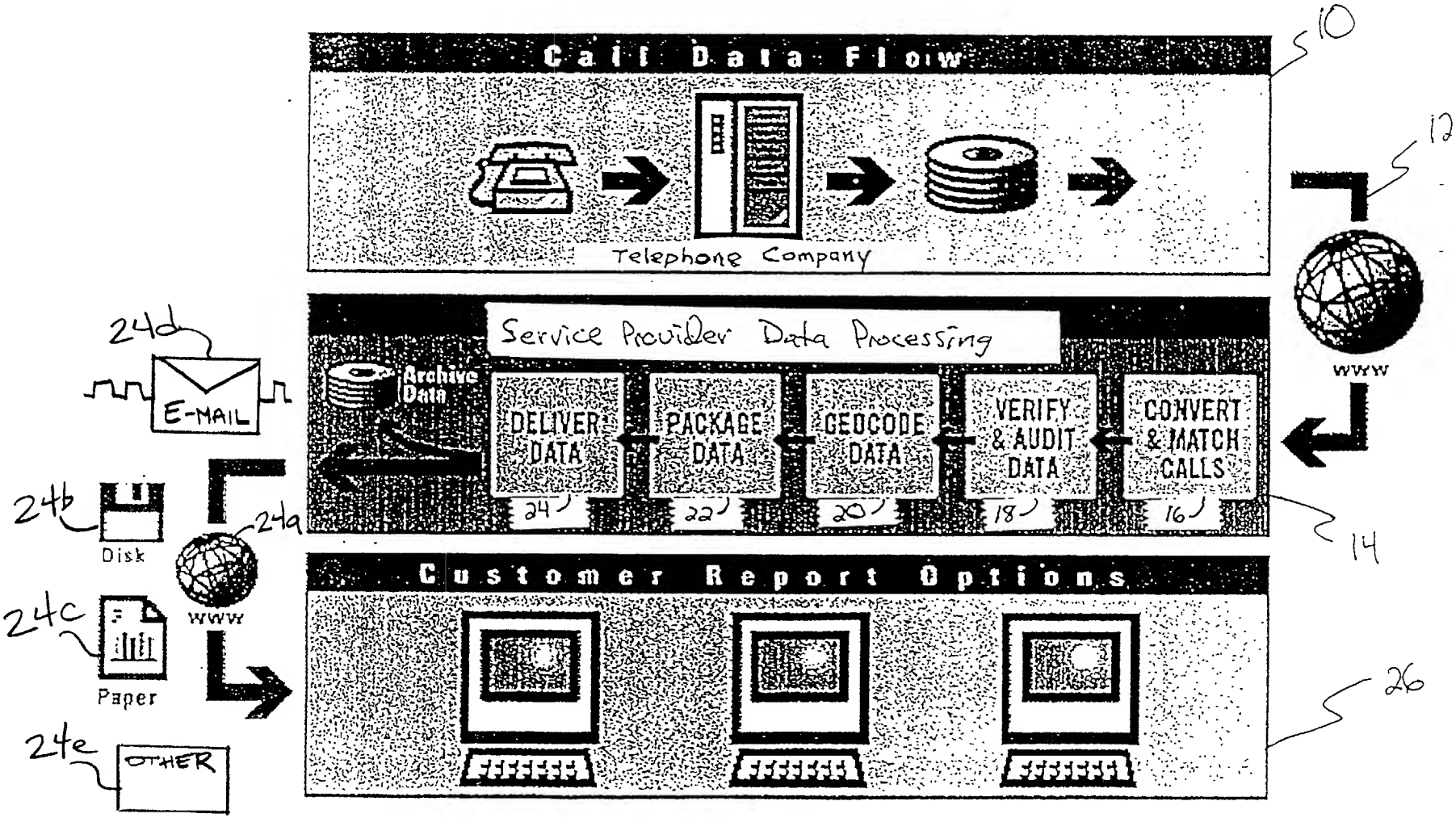


Figure 1

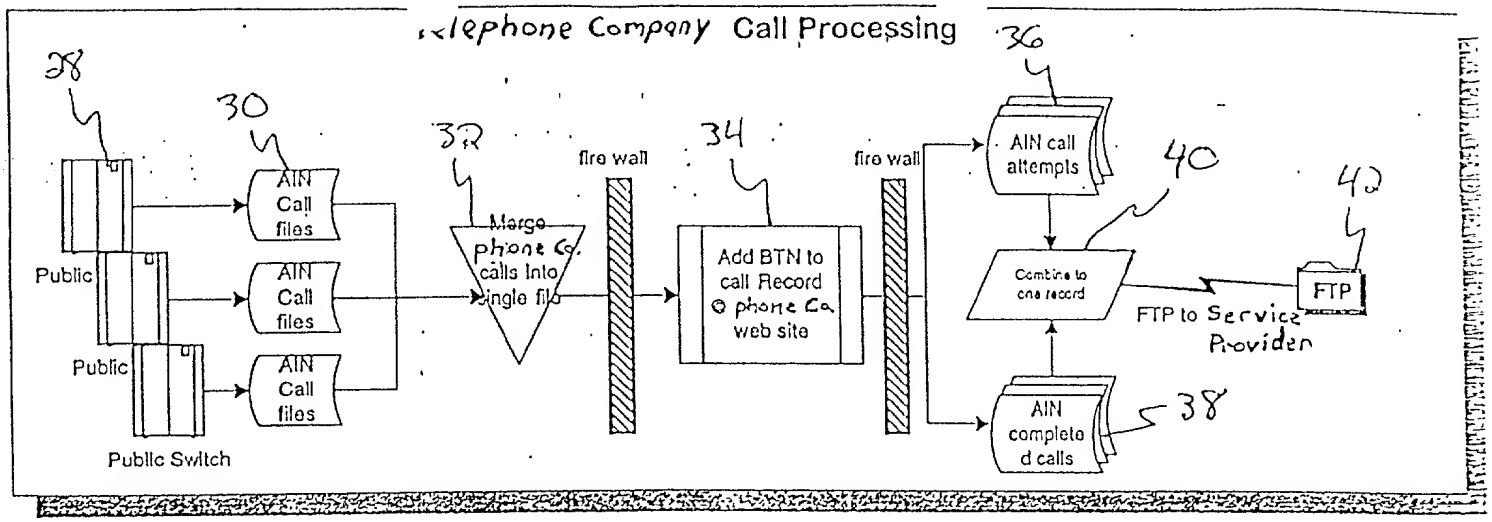

Telephone Company Call Processing
28
30
AIN Call files
AIN Call files
AIN Call files
Public
Public
Public Switch
32
Merge phone Co. calls into single file
fire wall
34
Add BTN to call Record @ phone Co. web site
fire wall
36
AIN call attempts
40
Combine to one record
42
FTP
FTP to Service Provider
AIN complete d calls
38

Fig. 2

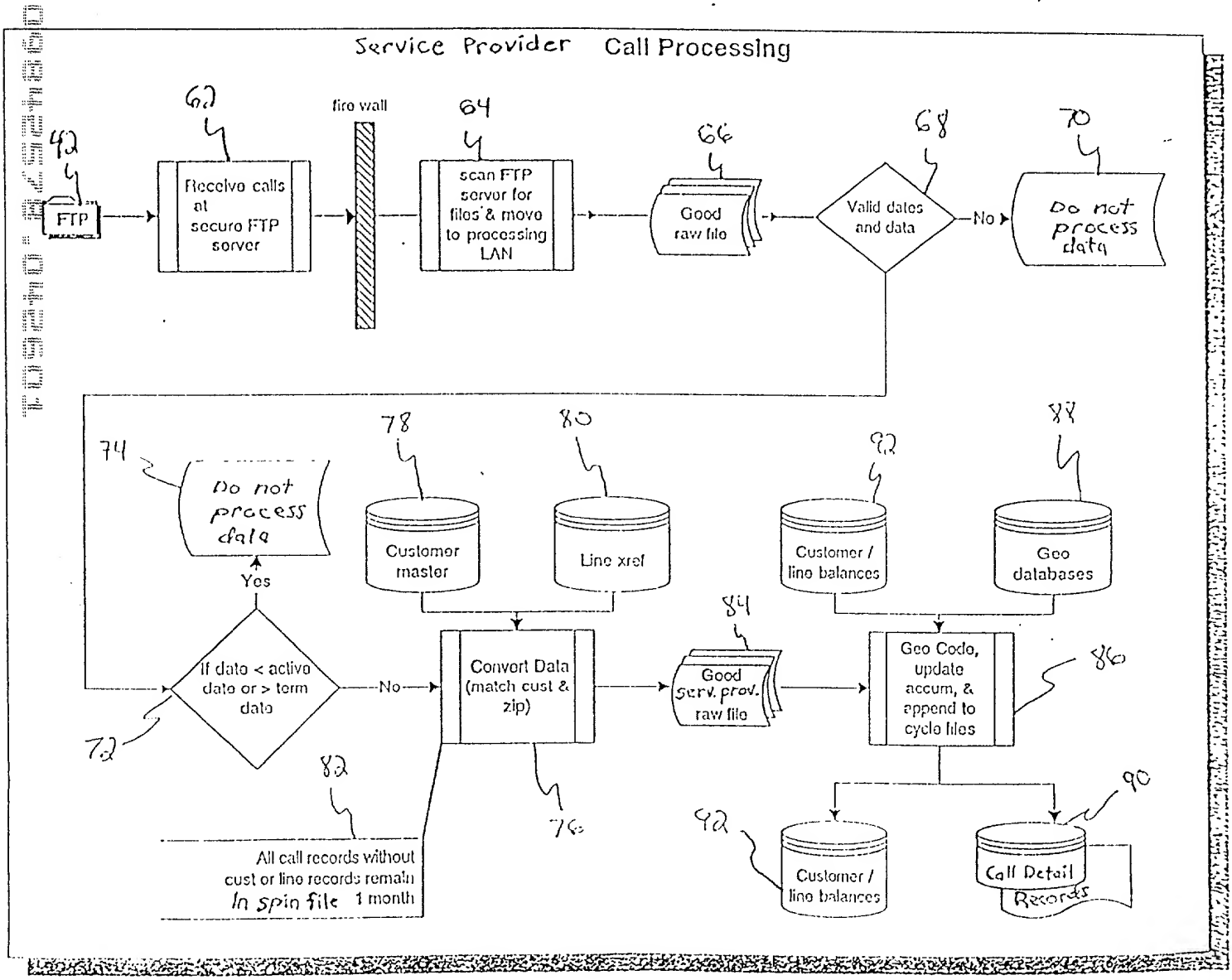
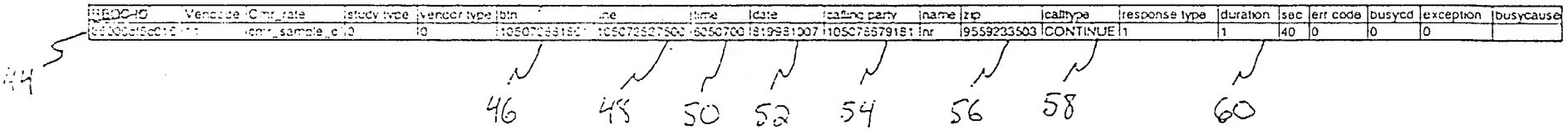

Service Provider Call Processing
42
FTP
62
Receive calls at secure FTP server
fire wall
64
scan FTP server for files & move to processing LAN
66
Good raw file
68
Valid dates and data
No
70
Do not process data
74
Do not process data
Yes
78
Customer master
80
Line xref
82
Customer / line balances
88
Geo databases
If date < active date or > term date
No
72
Convert Data (match cust & zip)
76
84
Good serv. prov. raw file
Geo Code, update accum, & append to cycle files
86
82
All call records without cust or line records remain in spin file 1 month
92
Customer / line balances
90
Call Detail Records

Fig. 4



RECORD	Vendor ID	mr_rate	study type	vendor type	btn	ine	time	date	calling party	name	zip	calltype	response type	duration	sec	err code	busycd	exception	busycause
5d300df5e012	111	dmr_sample_p10		0	10507088150	10507852750	6050700	8199881007	10507857918	lnr	9559233503	CONTINUE	1	1	40	0	0	0	

44 46 48 50 52 54 56 58 60

Fig. 3

Cycle Processing

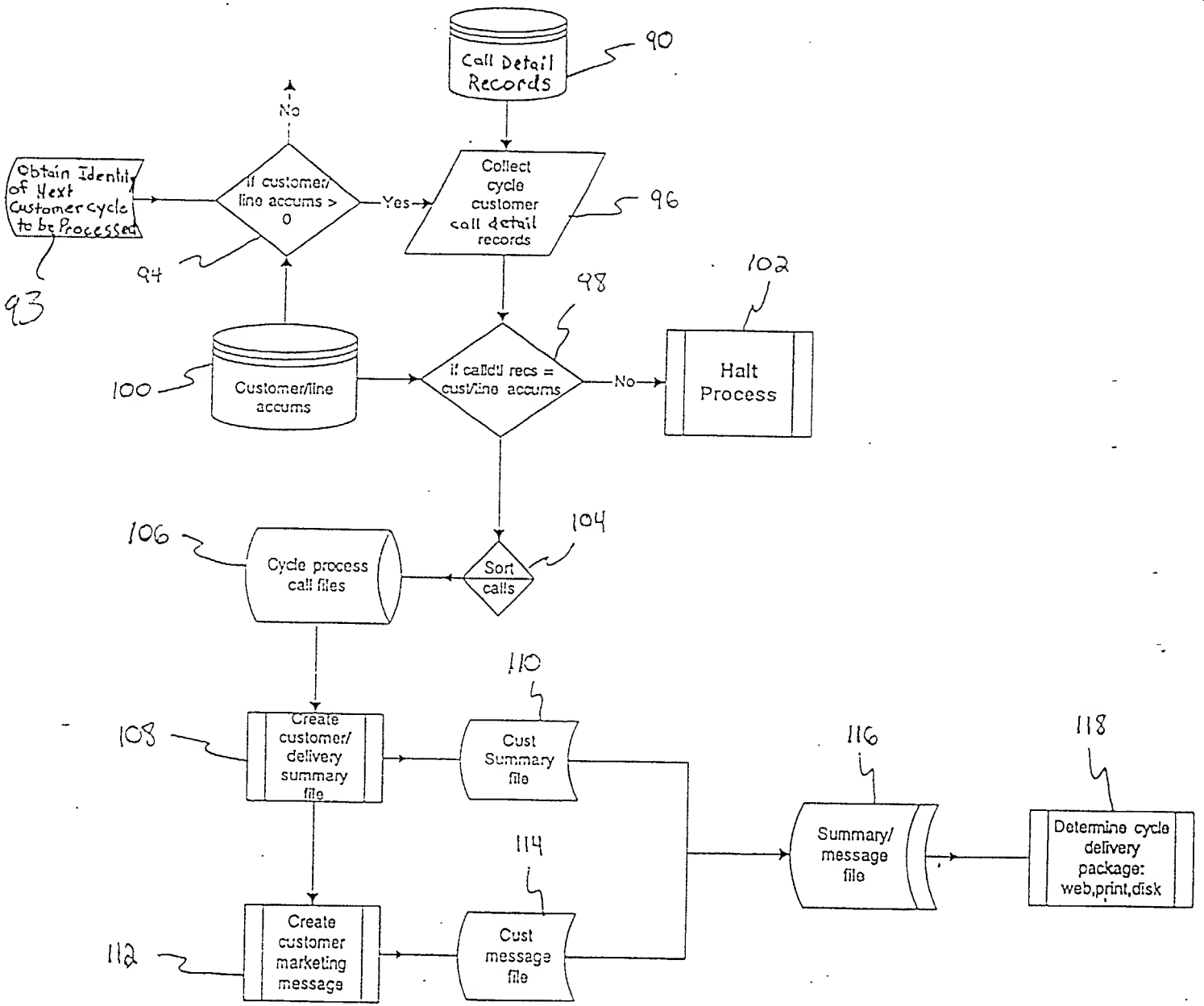


Fig. 5

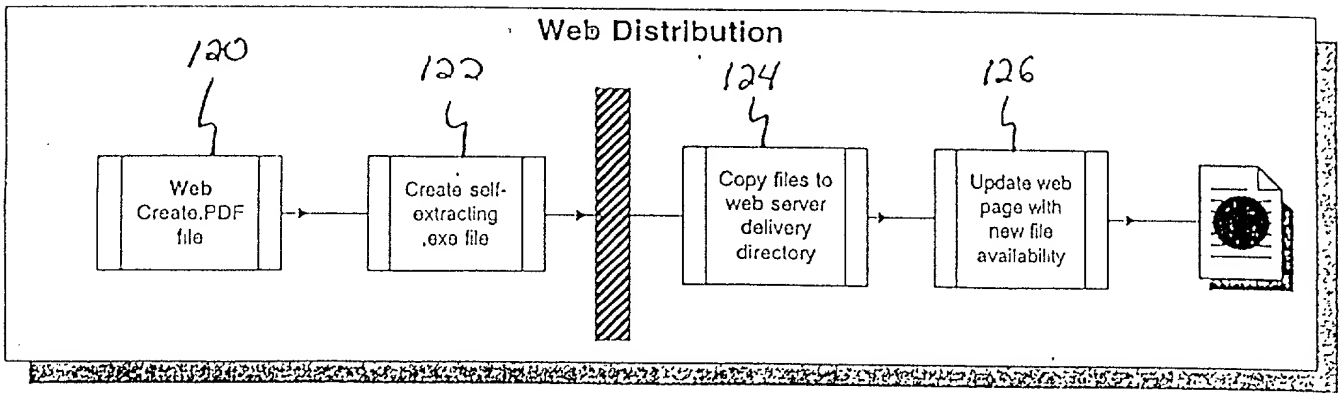

Web Distribution
120
122
124
126
Web Create.PDF file
Create self-extracting .exe file
Copy files to web server delivery directory
Update web page with new file availability

Fig. 6

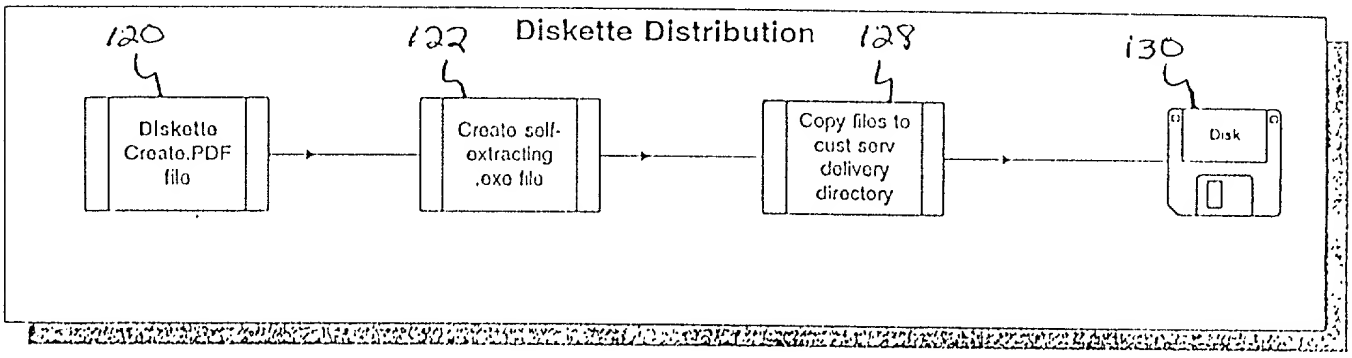

Diskette Distribution
120
122
128
130
Diskette Create.PDF file
Create self-extracting .exe file
Copy files to cust serv delivery directory
Disk

Fig. 7

FILE_ID	CDATE	CTIME	DN	CPN	CALL_TYPE	CALL_DISP	CALL_STAT	CALL_DUR	XACTION	CPN_NAME	POSTALCODE	LONGITUDE	LATITUDE	Q_BYTES	MISC
	8/22/98	04:18:15 PM	5135551212	9375787400	I	2	0	0		unavailable		-84.193714	39.759868	S	
	8/22/98	04:18:36 PM	5135551212	8122562495	I	0	1	260		unavailable		-85.384117	38.733633	S	
	8/22/98	04:32:30 PM	5135551212	7405458420	I	0	1	200		unavailable		-82.961757	40.232652	S	
	8/22/98	06:39:51 PM	5135551212	1111111111	I	0	1	360		unavailable		0.000000	0.000000	U	
	8/23/98	08:55:34 AM	5135551212	5555555555	I	0	1	2730		unavailable		0.000000	0.000000	U	
	8/23/98	09:09:07 AM	5135551212	1111111111	O	0	1	240		unavailable		0.000000	0.000000	U	
	8/23/98	09:52:46 AM	5135551212	1111111111	I	1	0	0		unavailable		0.000000	0.000000	U	
	8/23/98	12:22:41 PM	5135551212	1111111111	I	0	1	230		unavailable		0.000000	0.000000	U	
	8/23/98	12:48:28 PM	5135551212	5133901688	I	0	1	110		unavailable		-84.519930	39.102459	S	
	8/23/98	01:41:09 PM	5135551212	6066207160	I	0	1	220		unavailable		-84.519930	39.102459	S	
	8/23/98	01:53:10 PM	5135551212	9378565488	I	0	1	100		unavailable		-84.364952	39.623529	S	
	8/23/98	02:17:51 PM	5135551212	1111111111	I	2	0	0		unavailable		0.000000	0.000000	U	
	8/23/98	03:32:58 PM	5135551212	1111111111	I	0	1	50		unavailable		0.000000	0.000000	U	
	8/23/98	03:47:34 PM	5135551212	5136598931	I	3	0	0		unavailable		-84.519930	39.102459	S	
	8/23/98	05:30:56 PM	5135551212	7658471638	I	0	1	220		unavailable		-84.941571	40.049073	S	
	8/23/98	07:16:25 PM	5135551212	9372740967	I	0	1	70		unavailable		-84.225906	39.790287	S	
	8/23/98	11:09:44 PM	5135551212	1111111111	I	0	1	2720		unavailable		0.000000	0.000000	U	
	8/21/98	09:06:43 AM	5135551212	6066354067	O	0	1	50		unavailable	410019720	-84.419803	38.880692	A	
	8/20/98	09:17:34 AM	5135551212	6065895650	I	0	1	4400		unavailable	410058211	-84.722085	39.028344	A	
	8/19/98	08:33:35 AM	5135551212	6068697769	I	2	0	0		unavailable	410059751	-84.737297	39.075182	A	
	8/19/98	09:05:04 AM	5135551212	6066879769	I	0	1	2180		unavailable	410059751	-84.737297	39.075182	A	
	8/19/98	05:22:59 PM	5135551212	6066896779	I	0	1	2850		unavailable	410059751	-84.737297	39.075182	A	
	8/21/98	08:55:45 PM	5135551212	6066722444	I	0	1	280		unavailable	410069608	-84.369442	38.787168	A	
	8/17/98	11:59:37 AM	5135551212	6069218116	O	0	1	760		unavailable	410111135	-84.530487	39.082738	A	
	8/20/98	02:43:02 PM	5135551212	6062198116	I	0	1	3450		unavailable	410111135	-84.530487	39.082738	A	
	8/21/98	04:59:46 PM	5135551212	6062198116	I	1	0	0		unavailable	410111135	-84.530487	39.082738	A	
	8/18/98	10:21:30 AM	5135551212	6062916544	I	0	1	1610		unavailable	410111160	-84.529001	39.082483	A	
	8/19/98	09:26:36 AM	5135551212	6069214564	I	0	1	710		unavailable	410111160	-84.529001	39.082483	A	

90

Fig. 8

Geocoding logic hierarchy

	Criterion				Value
	CASE1 ~ 180				
IF	9 digit zip exists in zip field		& exists in ->	9 digit zip DB	A
	otherwise	9 digit zip (1st 5 digits)	exists in ->	5 digit zip DB	B
	otherwise	9 digit zip (1st 3 digits)	exists in ->	3 digit zip DB	C
	otherwise	npanxx of calling # field	exists in ->	npanxx DB	D
	otherwise	npa of calling # field	exists in ->	nap DB	E
	otherwise	use special value indicating unknown origin			F
	CASE2 ~ 182				
otherwise, IF	6, 7, or 8 digit zip exists in zip field (bad data)				
	AND	npanxx of calling # field	exists in ->	npanxx DB	G
	otherwise	npa of calling # field	exists in ->	nap DB	H
	otherwise	use special value indicating unknown origin			I
	CASE3 ~ 184				
otherwise, IF	5 digit zip exists in zip field		& exists in ->	5 digit zip DB	J
	otherwise	5 digit zip (1st 3 digits)	exists in ->	3 digit zip DB	K
	otherwise	npanxx of calling # field	exists in ->	npanxx DB	L
	otherwise	npa of calling # field	exists in ->	nap DB	M
	otherwise	use special value indicating unknown origin			N
	CASE4 ~ 186				
otherwise, IF	< 5 digit zip exists in zip field (bad data)				
	AND	npanxx of calling # field	exists in ->	npanxx DB	P
	otherwise	npa of calling # field	exists in ->	nap DB	Q
	otherwise	use special value indicating unknown origin			R
	CASE5 ~ 188				
otherwise, IF	0 or null exists in zip field (no zip)				
	AND	npanxx of calling # field	exists in ->	npanxx DB	S
	otherwise	npa of calling # field	exists in ->	nap DB	T
	otherwise	use special value indicating unknown origin			U

FIG. 9

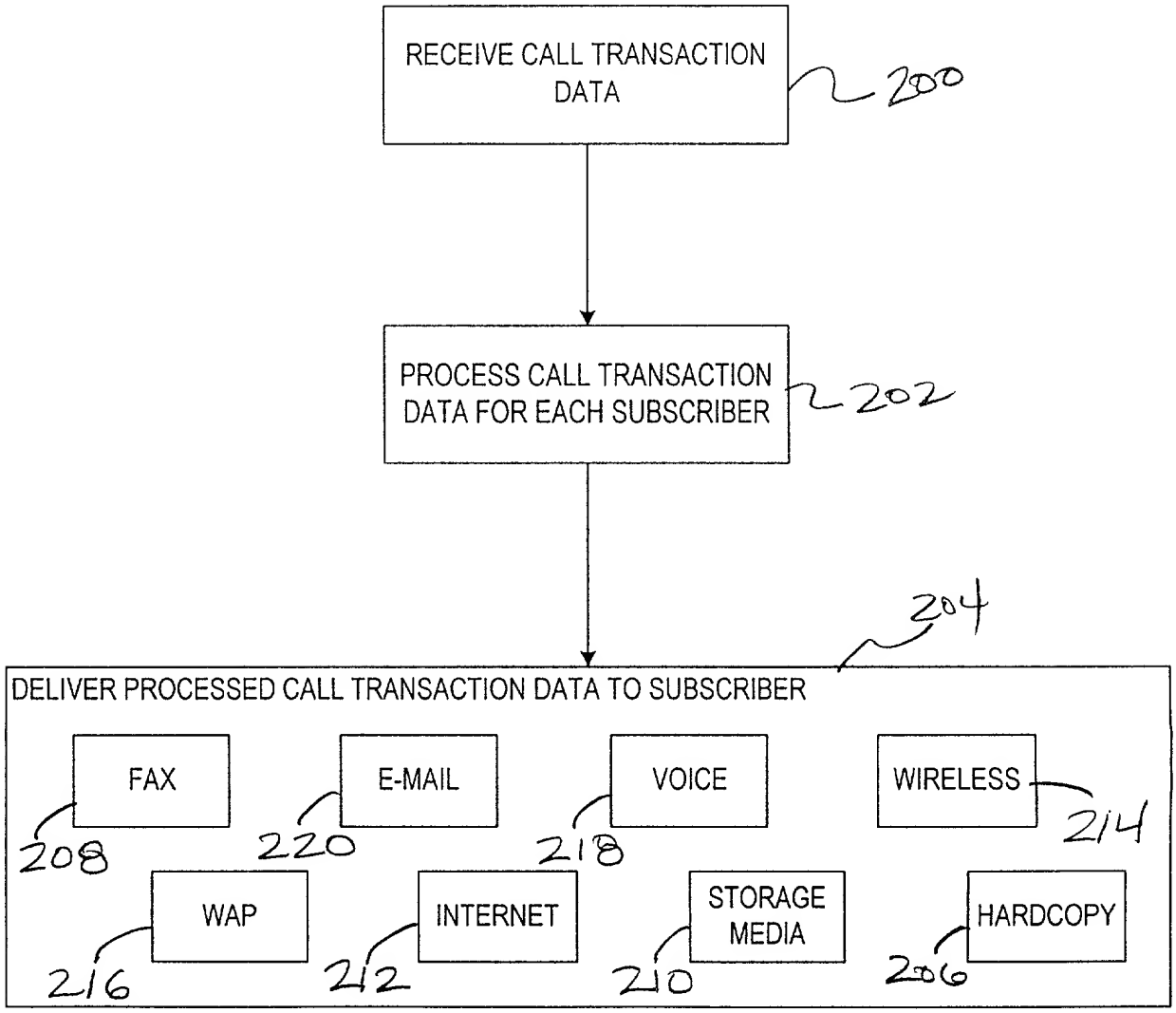

RECEIVE CALL TRANSACTION DATA
200
PROCESS CALL TRANSACTION DATA FOR EACH SUBSCRIBER
202
204
DELIVER PROCESSED CALL TRANSACTION DATA TO SUBSCRIBER
FAX
208
E-MAIL
220
VOICE
218
WIRELESS
214
WAP
216
INTERNET
212
STORAGE MEDIA
210
HARDCOPY
206

FIG. 10

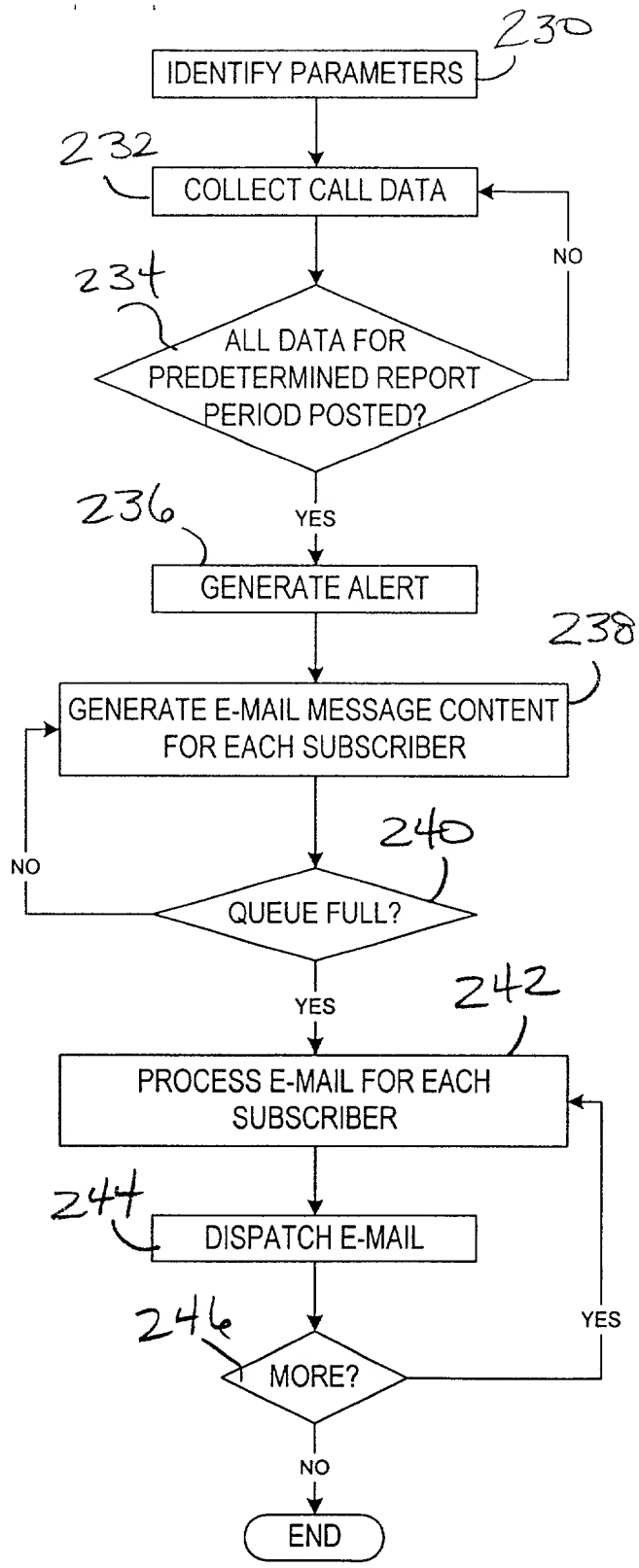

230
IDENTIFY PARAMETERS
232
COLLECT CALL DATA
NO
234
ALL DATA FOR PREDETERMINED REPORT PERIOD POSTED?
YES
236
GENERATE ALERT
238
GENERATE E-MAIL MESSAGE CONTENT FOR EACH SUBSCRIBER
240
NO
QUEUE FULL?
YES
242
PROCESS E-MAIL FOR EACH SUBSCRIBER
244
DISPATCH E-MAIL
246
YES
MORE?
NO
END

FIG. 11

252

250

From: TeleFlash@xyztelco.com
Sent: Monday, April 10, 2000 8:00
254 **To:** customer@ispserver.com
Subject: Telco Weekly Call Summary

FIG. 12

Telephone Co. *TeleFlash*

256

258 Here is your call summary information for the week of April 3, 2000 – April 9, 2000

Phone Number: 301-555-1234

Total incoming calls for the week:	**2909**	
Total answered calls for the week:	2744	(94%)
Total unanswered calls for the week:	30	(1%)
Total busy calls for the week:	134	(5%)
Total other calls for the week:	1	(0%)
Your 7 day average calls per	416	
Your Mon-Fri average calls per day:	562	
Your busiest calling day:	Thursday	
Your busiest calling hour:	3-4 PM	

260

262

Try Call Option-1 for as low as $25.00 a month

You will be able to analyze:

http://www.xyztelco.com

266

- Maps of calls and callers
- Lists of top callers and callers who received busies
- Who you spend the most amount of time with?
- Trends of what happens by week, month, etc...
- How effective your marketing and advertising programs are?

Advertisement Text... Advertisement Text... Advertisement Text... Advertisement Text...

264

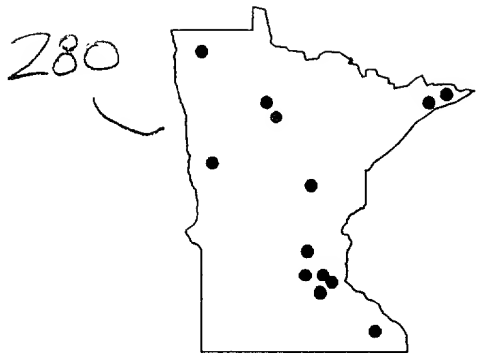
270

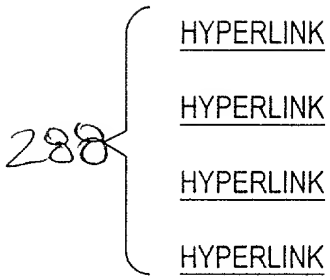
If you would like to have this E-mail sent to other individuals within your company, go to http://www.xyztelco/teleflash.com/personalpage

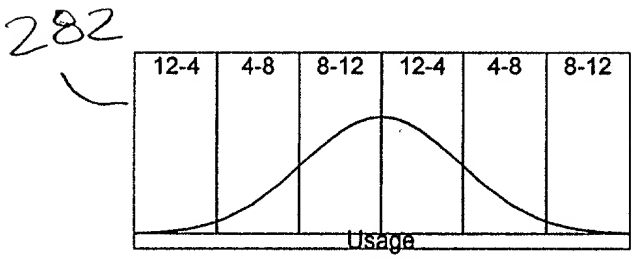
If you would like to stop receiving this E-mail notification, go to http://www.xyztelco/teleflash.com/personalpage

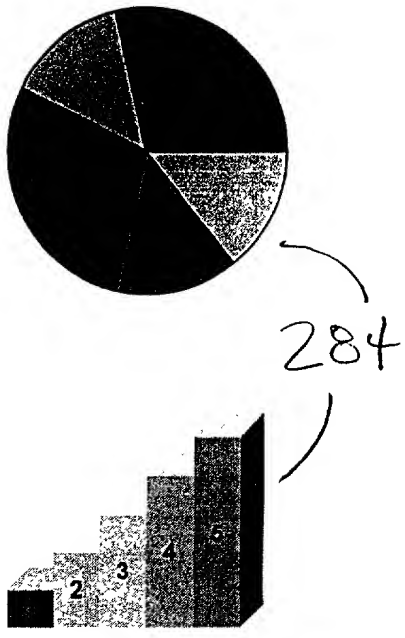
268

Docket No. 1565.1005


280


288
HYPERLINK
HYPERLINK
HYPERLINK
HYPERLINK


282
12-4
4-8
8-12
12-4
4-8
8-12
Usage


284
2
3
4
5

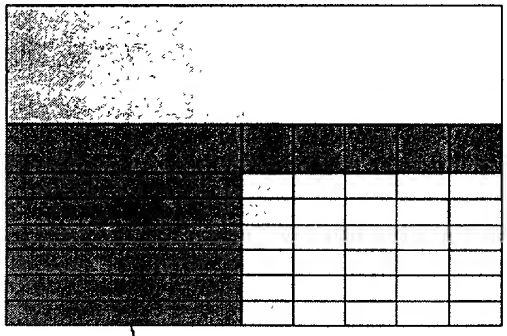

286

FIG. 13

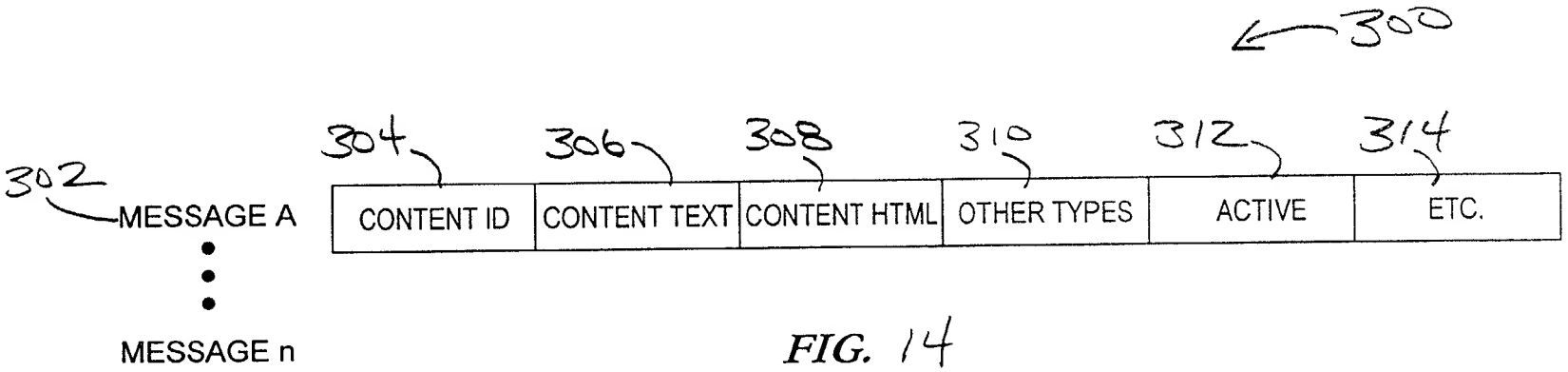

300
304
306
308
310
312
314
302
MESSAGE A
CONTENT ID
CONTENT TEXT
CONTENT HTML
OTHER TYPES
ACTIVE
ETC.
MESSAGE n

FIG. 14

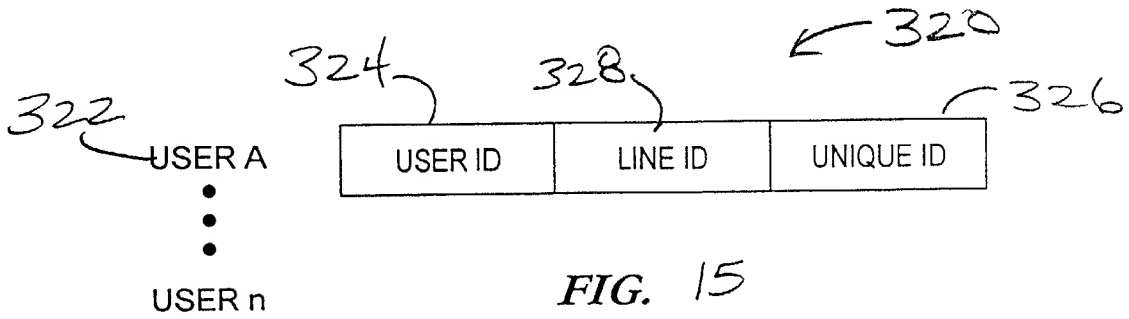

320
324
328
326
322
USER A
USER ID
LINE ID
UNIQUE ID
USER n

FIG. 15

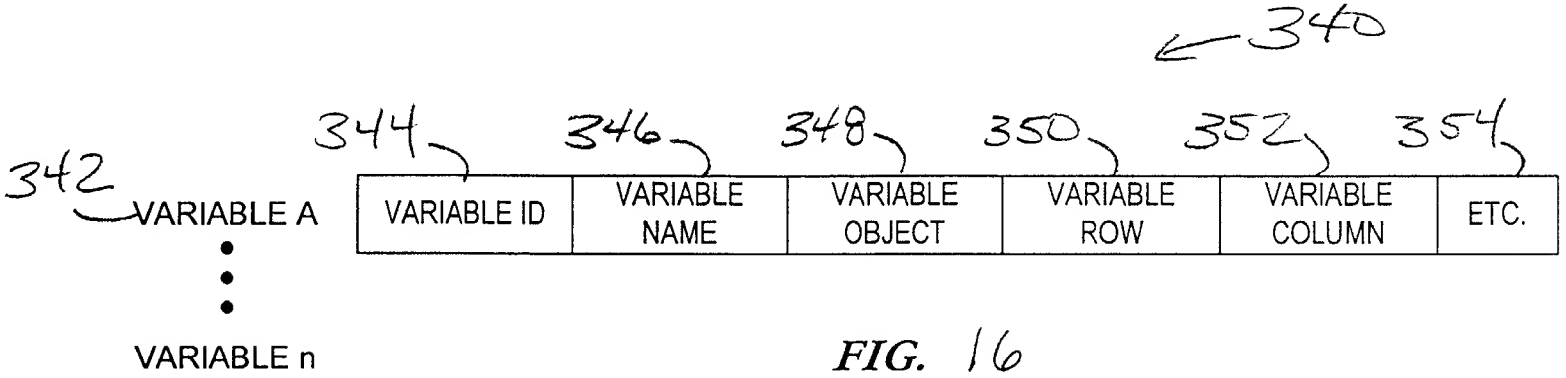


FIG. 16

360		
362	INCOMING	NUMBER OF CALLS THAT CAME IN
364	ANSWERED	NUMBER OF CALLS THAT WERE ANSWERED
366	UNANSWERED	NUMBER OF CALLS THAT WERE UNANSWERED
368	BUSY	NUMBER OF CALLS THAT WERE BUSY
370	OTHER	NUMBER OF CALLS THAT WERE OF AN UNKNOWN STATE
372	INCOMING %	PERCENTAGE OF CALLS THAT CAME IN (i.e., 100%)
374	ANSWERED %	PERCENTAGE OF CALLS THAT WERE ANSWERED
376	UNANSWERED %	PERCENTAGE OF CALLS THAT WERE UNANSWERED
378	BUSY %	PERCENTAGE OF CALLS THAT WERE BUSY
380	OTHER %	PERCENTAGE OF CALLS THAT WERE OF AN UNKNOWN STATE
382	SEVEN DAY AVERAGE	AVERAGE NUMBER OF CALLS FOR THE SEVEN DAYS
384	FIVE DAY AVERAGE	AVERAGE NUMBER OF CALLS FOR FIVE DAYS (M-F)
386	FIVE DAY TOTAL	NUMBER OF CALLS FOR FIVE DAYS (M-F)
388	BUSY DAY	THE DAY WITH THE MOST TOTAL CALLS
390	BUSY DAY TOTAL	NUMBER OF CALLS THAT OCCURRED FOR THE BUSIEST DAY
392	TOP ZIP	THE ZIP CODE WHERE THE MOST CALLS CAME FROM
	TOP STATE	THE STATE WHERE THE MOST CALLS CAME FROM

FIG. 17

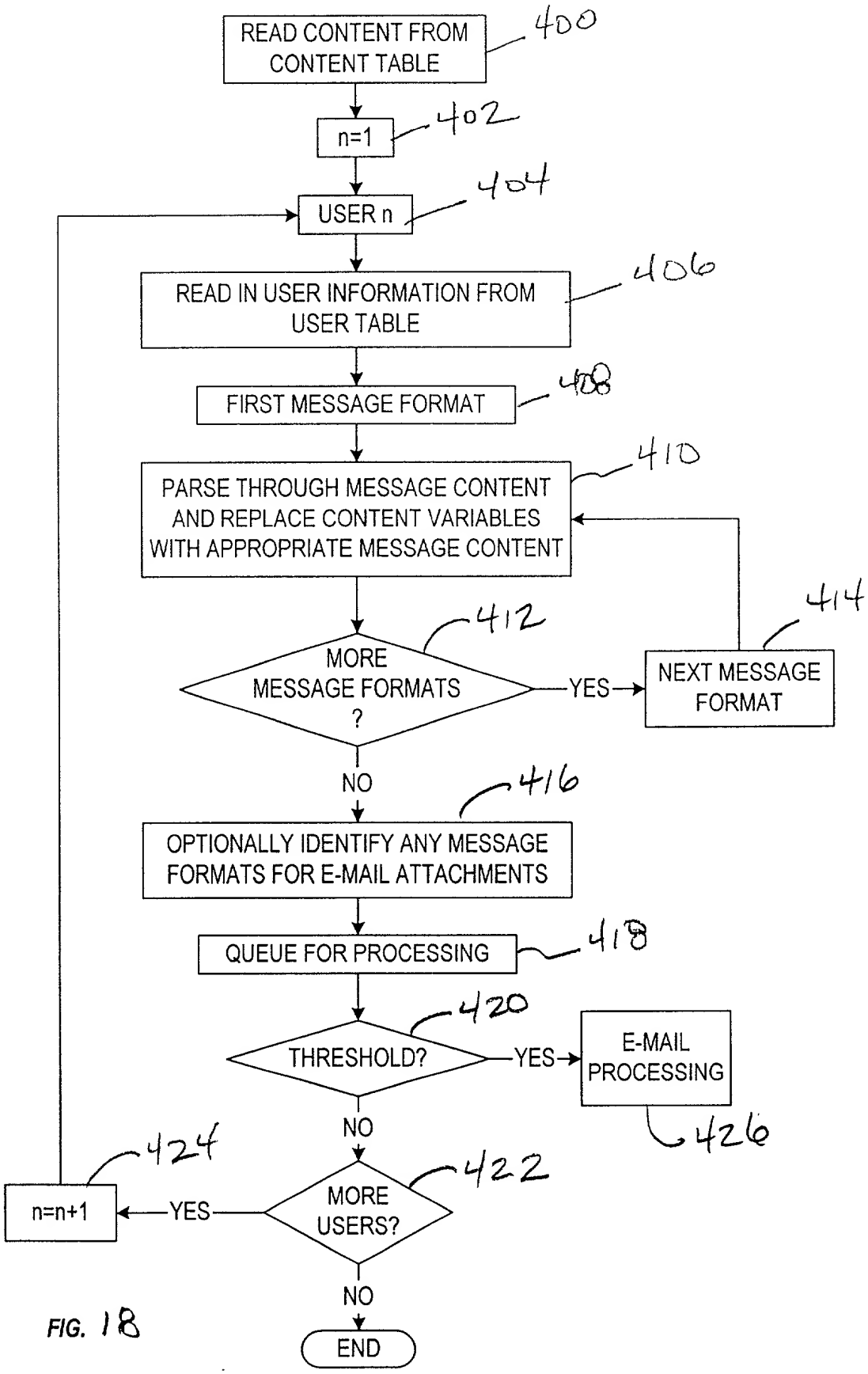

READ CONTENT FROM CONTENT TABLE
400
n=1
402
USER n
404
READ IN USER INFORMATION FROM USER TABLE
406
FIRST MESSAGE FORMAT
408
PARSE THROUGH MESSAGE CONTENT AND REPLACE CONTENT VARIABLES WITH APPROPRIATE MESSAGE CONTENT
410
MORE MESSAGE FORMATS ?
412
YES
NEXT MESSAGE FORMAT
414
NO
OPTIONALLY IDENTIFY ANY MESSAGE FORMATS FOR E-MAIL ATTACHMENTS
416
QUEUE FOR PROCESSING
418
THRESHOLD?
420
YES
E-MAIL PROCESSING
426
NO
MORE USERS?
422
YES
n=n+1
424
NO
END

FIG. 18

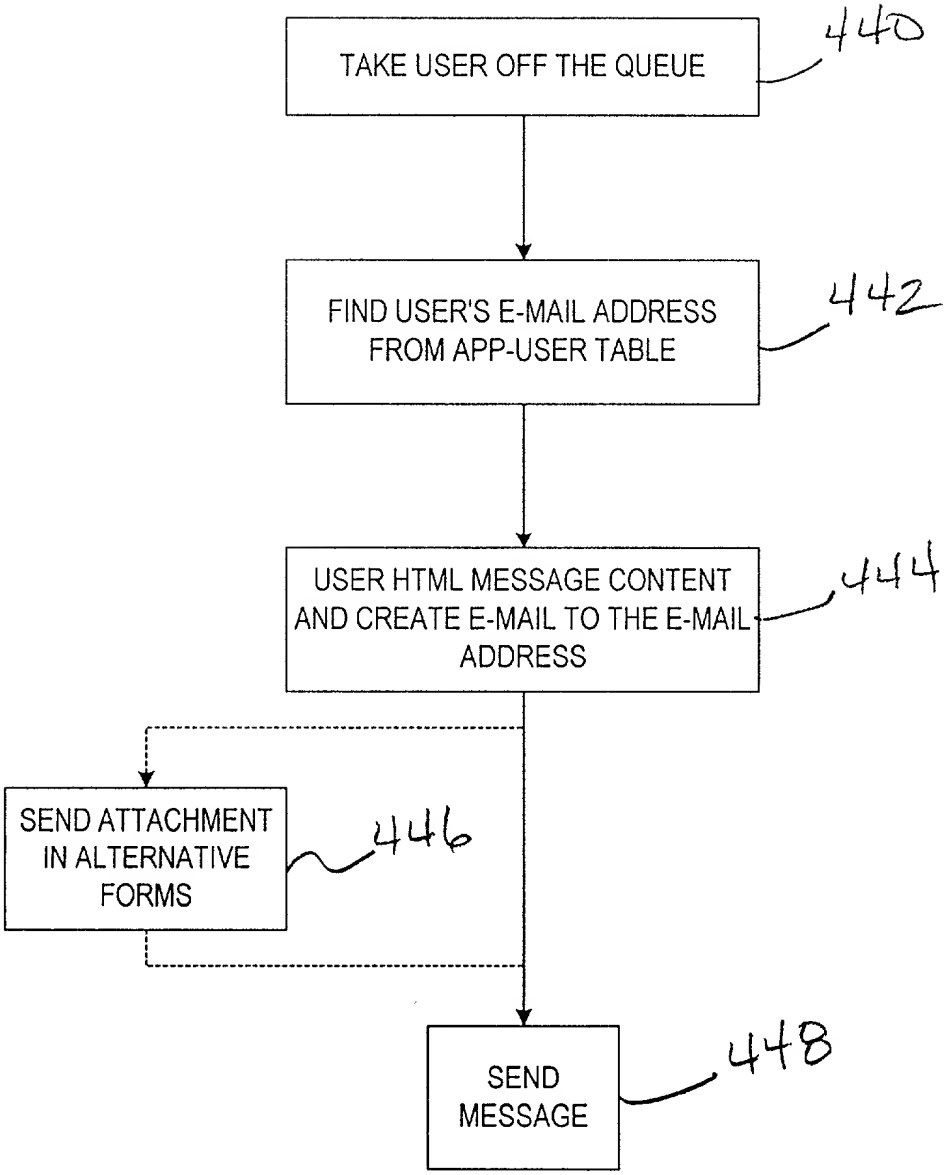

TAKE USER OFF THE QUEUE
440
FIND USER'S E-MAIL ADDRESS FROM APP-USER TABLE
442
USER HTML MESSAGE CONTENT AND CREATE E-MAIL TO THE E-MAIL ADDRESS
444
SEND ATTACHMENT IN ALTERNATIVE FORMS
446
SEND MESSAGE
448

FIG. 19

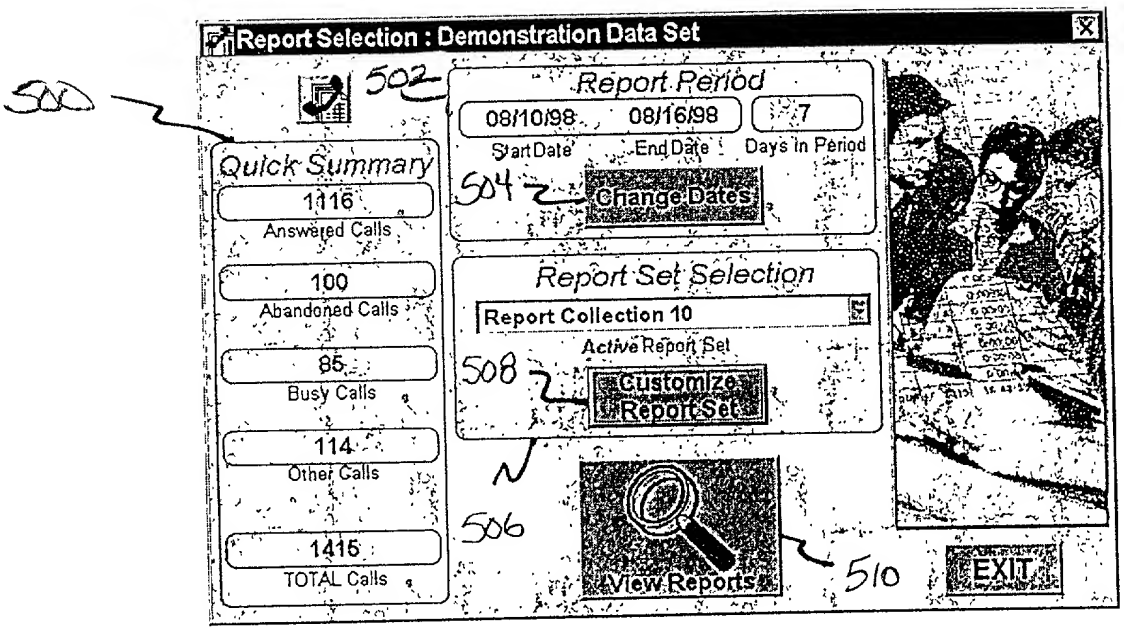

Report Selection : Demonstration Data Set
500
502
Quick Summary
1116
Answered Calls
100
Abandoned Calls
85
Busy Calls
114
Other Calls
1415
TOTAL Calls
Report Period
08/10/98
08/16/98
7
Start Date
End Date
Days in Period
504
Change Dates
Report Set Selection
Report Collection 10
Active Report Set
508
Customize Report Set
506
View Reports
510
EXIT

FIG. 20

520

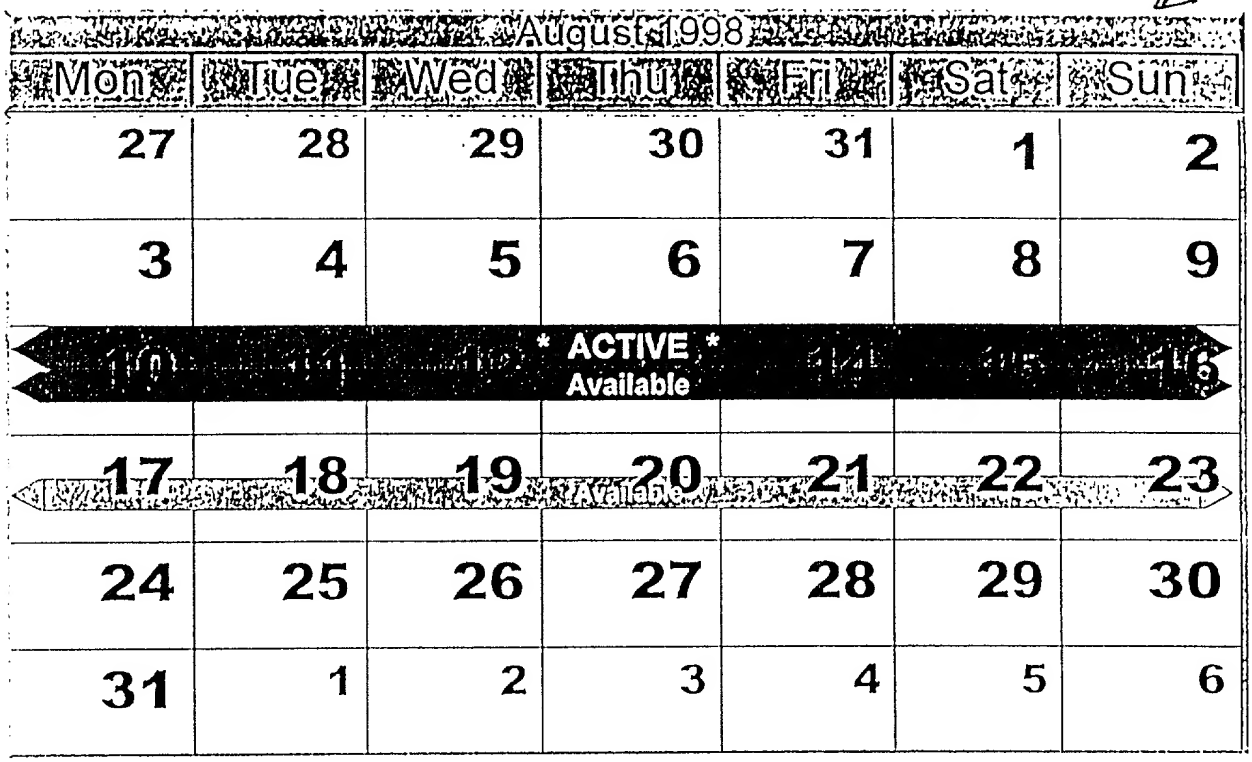


FIG. 21

Docket: 95P6660

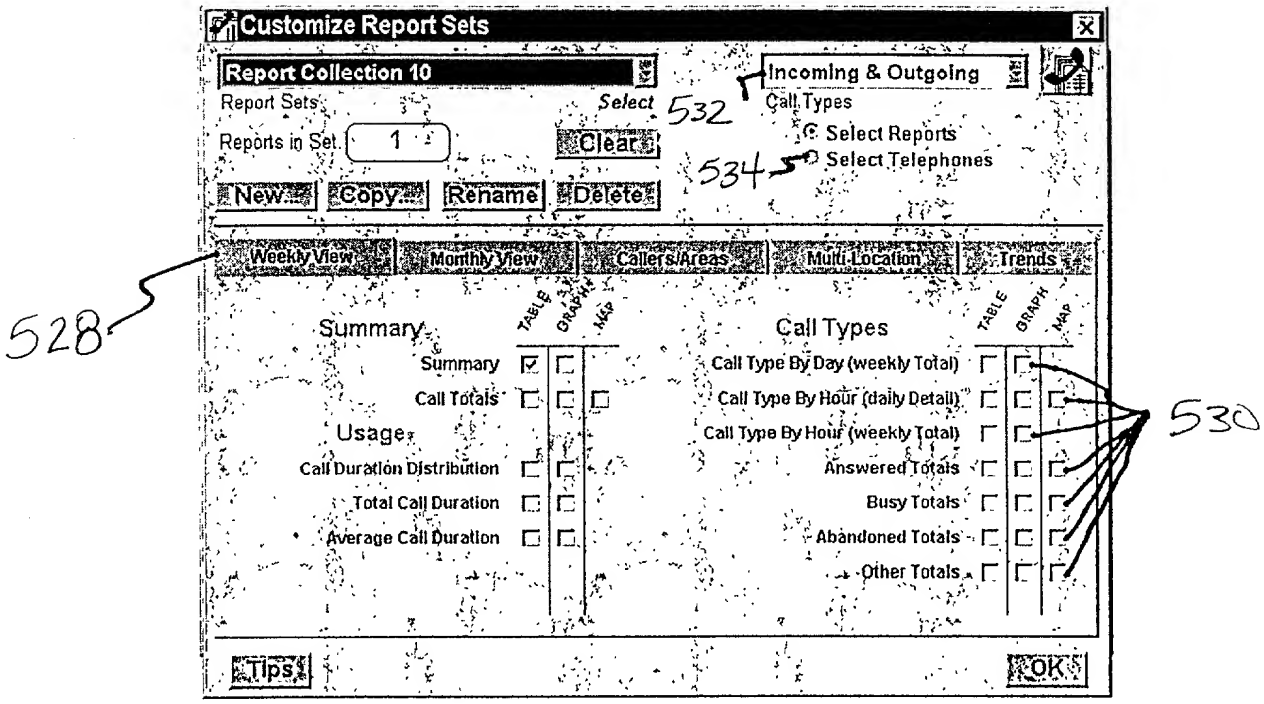

Customize Report Sets
Report Collection 10
Report Sets
Reports in Set 1
Select
Clear
532
Incoming & Outgoing
Call Types
Select Reports
Select Telephones
534
New...
Copy...
Rename
Delete
528
Weekly View
Monthly View
Callers/Areas
Multi-Location
Trends
Summary
TABLE
GRAPH
MAP
Summary
Call Totals
Usage
Call Duration Distribution
Total Call Duration
Average Call Duration
Call Types
Call Type By Day (weekly Total)
Call Type By Hour (daily Detail)
Call Type By Hour (weekly Total)
Answered Totals
Busy Totals
Abandoned Totals
Other Totals
530
Tips
OK

FIG. 22

October 26, 1998 - November 1, 1998

New ZIP Codes

540

New ZIP codes discovered in the current date range ranked by answered call count.

Zip Code	State	Call Count	First Call Date & Time	Last Call Date & Time	Total Duration
55402	MN	11	10/26/98 11:07:00 AM	10/30/98 02:46:00 PM	0:27:40.0
55416	MN	11	10/26/98 12:11:00 PM	10/29/98 02:37:00 PM	0:11:25.0
84111	UT	6	10/26/98 09:56:00 AM	10/28/98 02:15:00 PM	0:31:12.0
55343	MN	6	10/26/98 01:38:00 PM	10/30/98 11:57:00 AM	0:14:28.0
56304	MN	5	10/26/98 06:43:00 PM	10/28/98 05:47:00 PM	0:44:51.0
85012	AZ	4	10/27/98 05:15:00 PM	10/29/98 05:48:00 PM	0:06:14.0
55347	MN	4	10/26/98 06:51:00 AM	10/28/98 02:43:00 PM	0:02:31.0
98191	WA	3	10/26/98 10:34:00 AM	10/29/98 06:09:00 PM	0:16:07.0
55104	MN	3	10/26/98 11:48:00 AM	10/27/98 11:30:00 AM	0:03:12.0
55415	MN	3	10/27/98 05:34:00 PM	10/30/98 01:03:00 PM	0:02:17.0
80132	CO	3	10/26/98 12:57:00 PM	10/26/98 02:57:00 PM	0:01:24.0
55425	MN	2	10/26/98 04:25:00 PM	10/28/98 03:56:00 PM	0:06:05.0
98188	WA	2	10/28/98 01:26:00 PM	10/28/98 01:29:00 PM	0:05:34.0
83204	ID	2	10/30/98 11:09:00 AM	10/30/98 11:09:00 AM	0:04:48.0
55431	MN	2	10/26/98 03:59:00 PM	10/30/98 09:44:00 AM	0:03:39.0
55124	MN	2	10/27/98 02:08:00 PM	10/27/98 02:10:00 PM	0:03:07.0
55364	MN	2	10/27/98 03:50:00 PM	10/27/98 03:50:00 PM	0:00:46.0
55437	MN	2	10/28/98 05:11:00 PM	10/29/98 03:25:00 PM	0:00:29.0
55305	MN	1	10/27/98 03:20:00 PM	10/27/98 03:20:00 PM	0:09:54.0
85283	AZ	1	10/28/98 05:44:00 PM	10/28/98 05:44:00 PM	0:07:33.0
85024	AZ	1	10/27/98 05:41:00 PM	10/27/98 05:41:00 PM	0:04:06.0
80202	CO	1	10/30/98 01:36:00 PM	10/30/98 01:36:00 PM	0:03:35.0
55118	MN	1	10/30/98 08:37:00 AM	10/30/98 08:37:00 AM	0:03:17.0
97401	OR	1	10/29/98 02:13:00 PM	10/29/98 02:13:00 PM	0:02:32.0
80206	CO	1	10/28/98 10:09:00 AM	10/28/98 10:09:00 AM	0:02:02.0
68144	NE	1	10/28/98 03:14:00 PM	10/28/98 03:14:00 PM	0:01:51.0
55391	MN	1	10/28/98 05:36:00 PM	10/28/98 05:36:00 PM	0:01:48.0
55011	MN	1	10/26/98 02:30:00 PM	10/26/98 02:30:00 PM	0:01:47.0
85255	AZ	1	10/27/98 05:55:00 PM	10/27/98 05:55:00 PM	0:01:22.0
99216	WA	1	10/30/98 11:29:00 AM	10/30/98 11:29:00 AM	0:01:11.0
97204	OR	1	10/26/98 02:08:00 PM	10/26/98 02:08:00 PM	0:00:57.0
55113	MN	1	10/26/98 03:59:00 PM	10/26/98 03:59:00 PM	0:00:43.0
68102	NE	1	10/26/98 12:05:00 PM	10/26/98 12:05:00 PM	0:00:41.0
98004	WA	1	10/30/98 03:32:00 PM	10/30/98 03:32:00 PM	0:00:41.0
55422	MN	1	10/26/98 11:12:00 AM	10/26/98 11:12:00 AM	0:00:20.0
55102	MN	1	10/27/98 11:47:00 AM	10/27/98 11:47:00 AM	0:00:07.0
55427	MN	1	10/26/98 04:09:00 PM	10/26/98 04:09:00 PM	0:00:06.0
55404	MN	1	10/26/98 04:26:00 PM	10/26/98 04:26:00 PM	0:00:05.0
55420	MN	1	10/26/98 10:05:00 AM	10/26/98 10:05:00 AM	0:00:03.0

FIG. 23

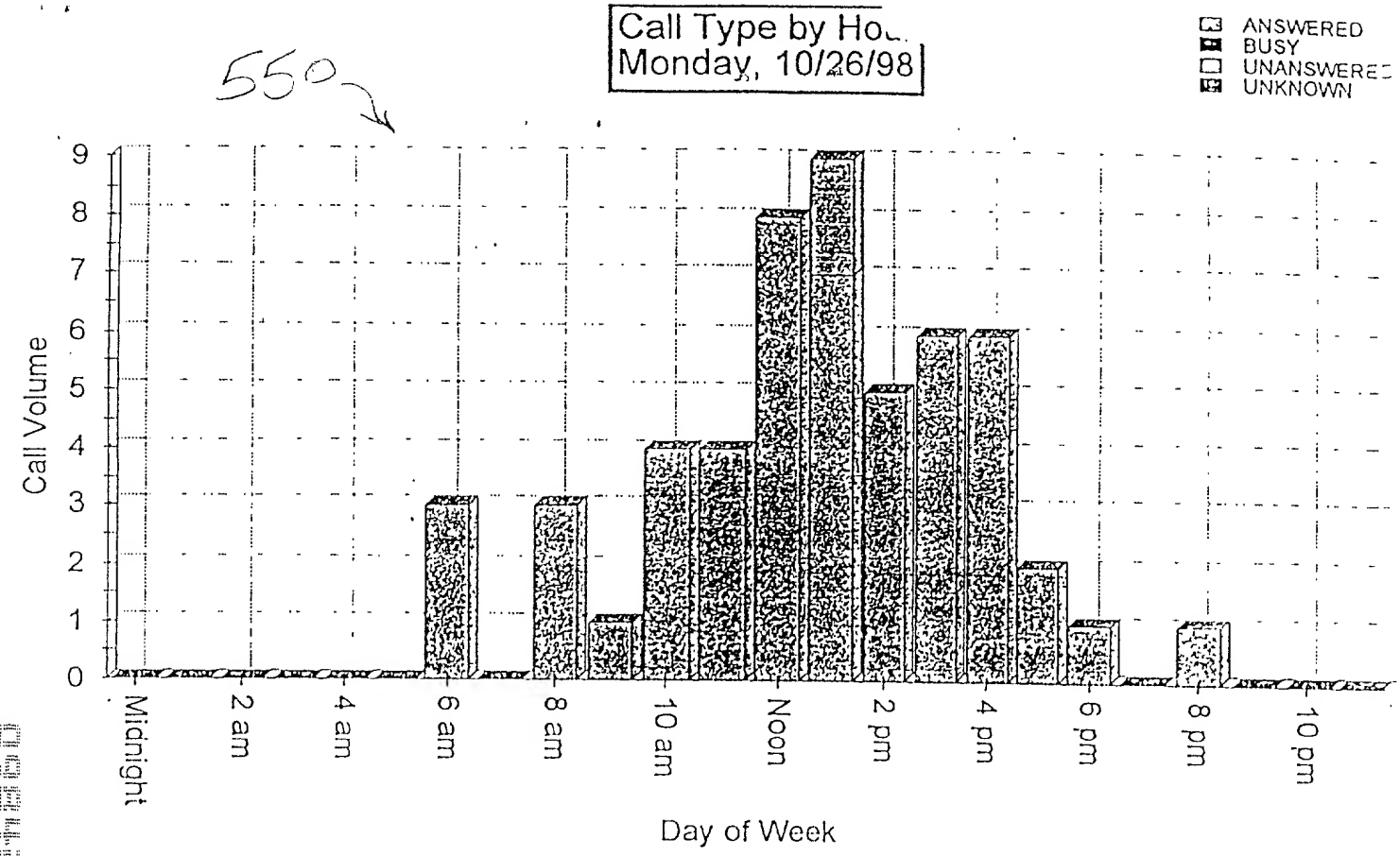
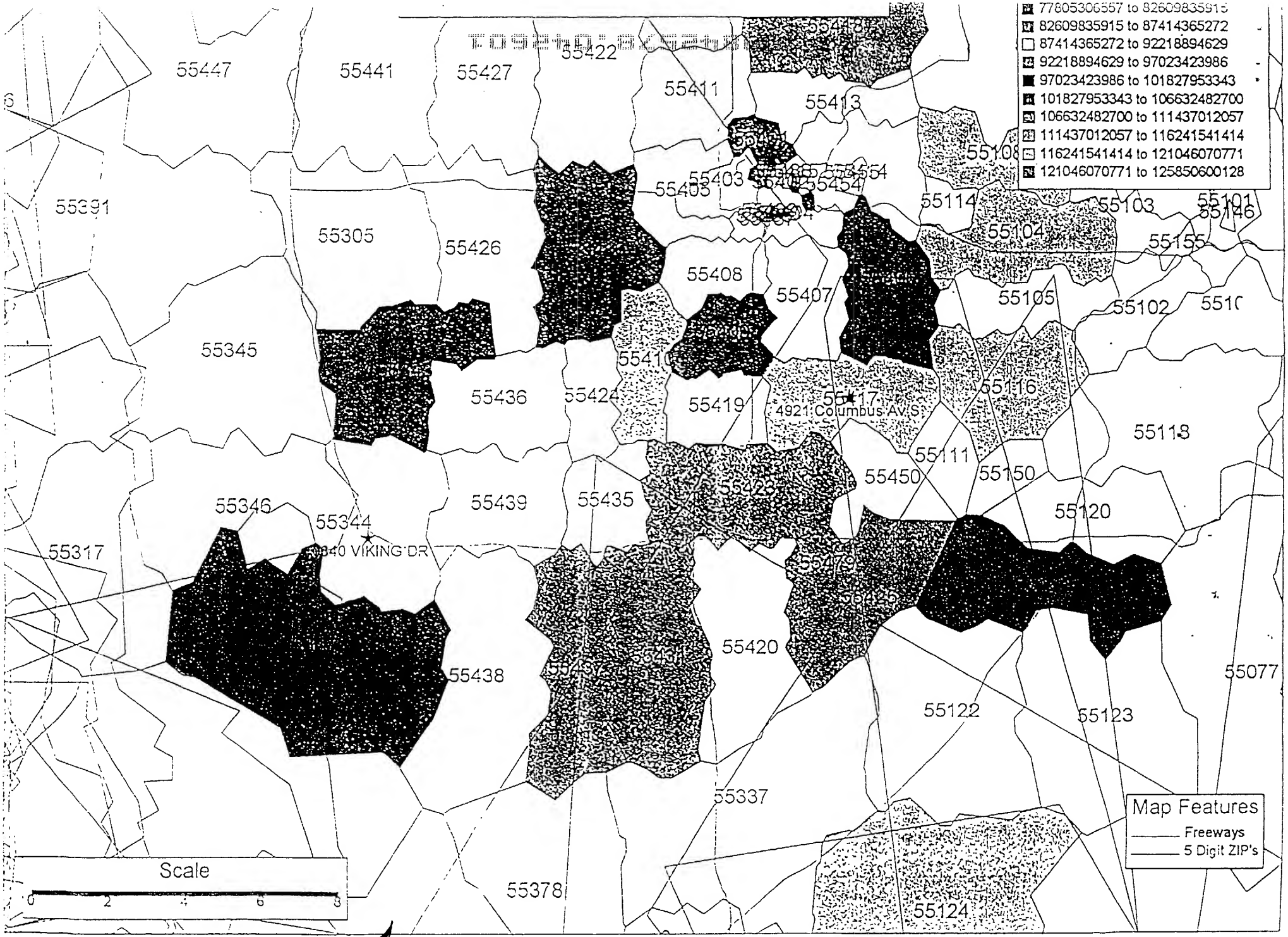


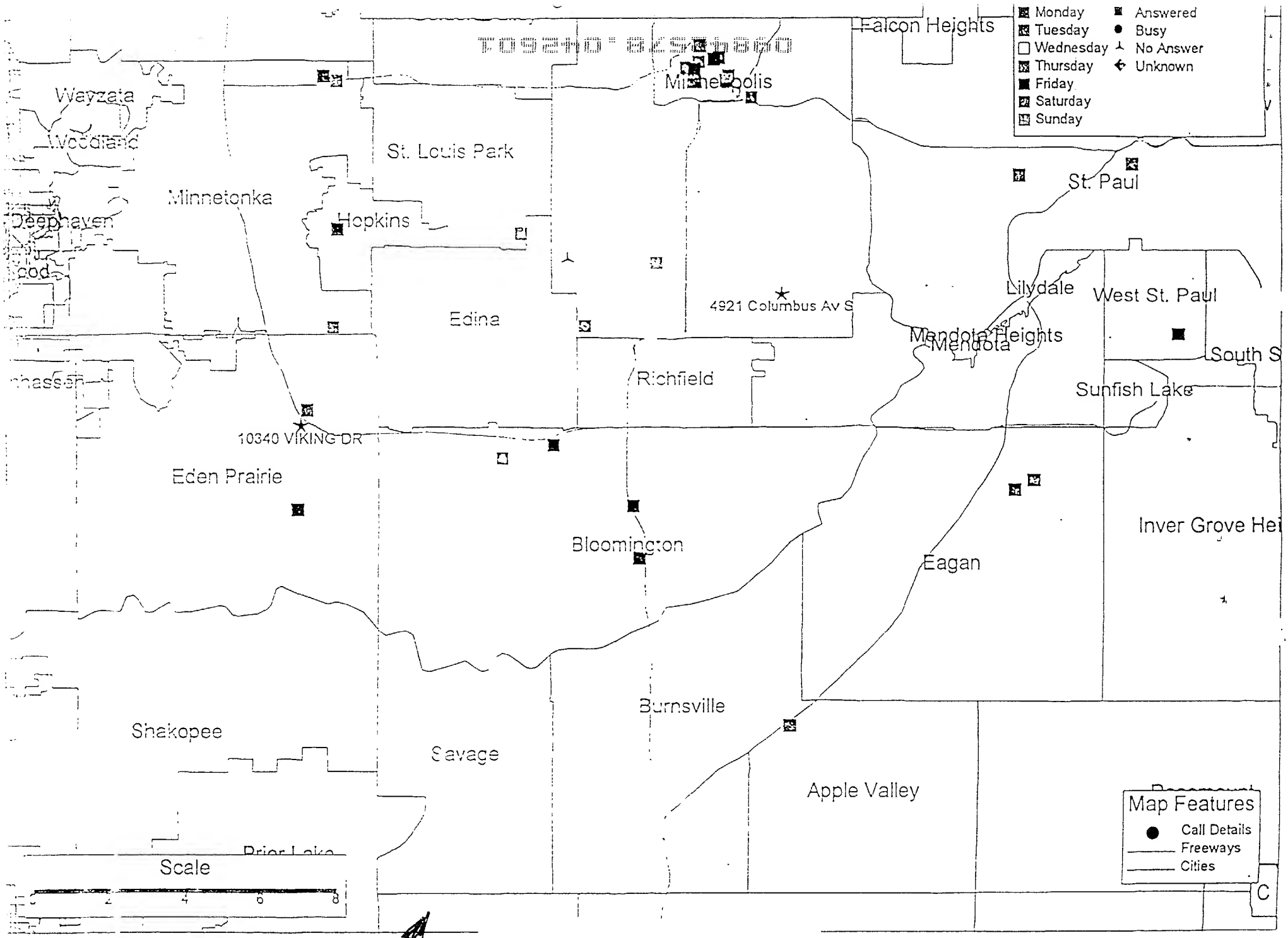
FIG. 24

Attached Exhibit


77805306557 to 82609835915
82609835915 to 87414365272
87414365272 to 92218894629
92218894629 to 97023423986
97023423986 to 101827953343
101827953343 to 106632482700
106632482700 to 111437012057
111437012057 to 116241541414
116241541414 to 121046070771
121046070771 to 125850600128
55447
55441
55427
55422
55411
55413
55391
55305
55426
55403
55408
55407
55114
55103
55104
55155
55101
55146
55345
55436
55424
55419
55417
4921 Columbus Av S
55116
55118
55111
55450
55150
55346
55344
840 VIKING DR
55439
55435
55423
55120
55317
55420
55438
55077
55122
55123
55337
55378
55124
Map Features
Freeways
5 Digit ZIP's
Scale
0
2
4
6
8

560

FIG. 25


Monday
Tuesday
Wednesday
Thursday
Friday
Saturday
Sunday
Answered
Busy
No Answer
Unknown
Falcon Heights
Minneapolis
Wayzata
Woodland
St. Louis Park
Minnetonka
Hopkins
St. Paul
Deephaven
4921 Columbus Av S
Lilydale
West St. Paul
Edina
Mendota Heights
Mendota
South S
Richfield
Sunfish Lake
10340 VIKING DR
Eden Prairie
Bloomington
Eagan
Inver Grove Hei
Burnsville
Shakopee
Savage
Apple Valley
Prior Lake
Scale
Map Features
Call Details
Freeways
Cities

570

FIG. 26